CLAIMS

What is claimed is:

1.   A method for protecting memory space in a target storage device during a write operation in a computer system, the method comprising:

creating a single data packet, including user data that is to be written to said target storage device and key data that is used to establish authorization to store said user data;

transmitting said single data packet to the target storage device;

determining whether said key data is valid;

writing said user data into said target storage device only when said key data is valid.

2.   The method of claim 1 further comprising:

calculating key data based on said gathered user data; and

combining said gathered user data and said calculated key data to form said composed single data packet.

3.   The method of claim 1 further comprising:

performing a boolean operation on selected bits of said user data to generate said key data.

4.   The method of claim 1 further comprising:

generating verification data from said user data at a controller of said target storage device; and

comparing said key data in said single data packet with said verification data to determine if said key data matches said verification data.

5.   The method of claim 4 further comprising:

storing said user data to said target storage device if said key data matches said verification data.

6.   The method of claim 1 further comprising:

generating key data based on a destination address of said write operation.

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7.   The method of claim 1 further comprising:

generating key data based on a system clock setting of said computer

system.

8.   A system for conducting a protected memory write to a storage

device in a single transaction within a computer system, the system comprising:

means for simultaneously delivering user data and key data to a controller

of said storage device, wherein said user data is to be written to said storage

device and said key data is used to establish authorization to store said user data;

and

means for determining whether said key data authorizes writing said user

data to said storage device.

9.   The system of claim 8 further comprising:

means for writing said user data to said storage device only when said key

data authorizes writing said user data.

10.   The system of claim 8 further comprising:

means, at an originating device, for calculating said key data using an

algorithm before said user data and said key data is sent to said storage device.

11.   The system of claim 10 wherein said algorithm calculates said key

data from said user data.

12.   The system of claim 8 wherein said determining means further

comprises:

means for generating verification data at said storage device controller;

and

means for comparing said verification data to said key data.

13.   The system of claim 8 wherein said determining means further

comprises:

means for authorizing writing of said user data only where said

verification data matches said key data.

14. The system of claim 11 wherein said algorithm calculates said key data based on a clock setting of said computer system.

15. A computer program product having a computer readable medium having computer program logic recorded thereon for protecting memory space in a target storage device during a write operation in a computer system, the computer program product comprising:

code for composing a single data packet including user data and key data, wherein said user data is to be written to said target storage device and said key data is used to establish authorization to store said user data;

code for transmitting said single data packet to said target storage device; and

code for determining whether said key data is valid.

16. The computer program product of claim 15 further comprising:

code for writing said user data into said target storage device only when said key data is valid.

17. The computer program product of claim 15 wherein the code for composing comprises:

code for gathering user data for transmission to said target storage device;

code for calculating key data based on said gathered user data; and

code for combining said gathered user data and said calculated key data to form said composed single data packet.

18. The computer program product of claim 17 wherein the code for calculating comprises:

code for performing a boolean operation on selected bits of said user data to generate said key data.

19. The computer program product of claim 17 wherein the code for determining comprises:

code for generating verification key data from said user data at a controller of said target storage device; and

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code for establishing said calculated key data as valid only if said generated verification key data matches said key data included in said single data packet.

20.   The computer program product of claim 19 wherein said the code for generating verification data comprises:

code for repeating said step of calculating key data at said controller of said target storage device.